[Roman Peasantry.—From Pinelli.]

## ROMAN PEASANTRY.

Bartolommeo Pinelli, who designed the various groups of brigands which are so well known, delineated with the same spirit and truthfulness the sports and pastimes, the costumes and the striking customs of the peasantry of the Roman states, where, in many respects, the living population bear the impress of antiquity, and are probably but little changed from what the people were

"When He from Troy
Went up the Tiber."

The difference in costume between one district and another leads back to the time when the Campagna of Rome, and the hills that gird it, were divided into a number of small, separate, and independent states; and in some few cases it marks as clearly the extent of those miniature republics, or patriarchal kingdoms, as they could be marked by Cluverius or the most learned on the subject of ancient geography. Each of these districts preserves its own costume distinct from that of its neighbours, and not the slightest change or variation is allowed in it. What we call 'fashion' is an arbiter utterly unknown among the peasantry of the south of Italy. Every man, and every woman too, dress precisely as their father and mother had done before them, and as their progenitors had dressed for ages. In some of the most rural districts there seems to have been scarcely the slightest change either in fashion or material since the days of the Cæsars, or the days of the first consuls, or the still remoter times of the kingly rulers: the coats of the men are undressed sheep-skins with the fleece on them, and the rest of their attire is made of flax cultivated in their own fields, spun with the distaff, and woven with a loom quite as simple as any that could have been in use even in the days of Homer, by their own women. In several parts of the Campagna of Rome the dresses of both sexes are identically the same as we see represented in bassi-rilievi and other sculptures in the Vatican, or in the great gallery at Florence, or in the splendid museum at Naples, so rich with the spoils of Herculaneum and Pompeii. The same antiquity or identity of costume is found in innumerable districts of the Neapolitan kingdom; but the most striking instance we remember was one that fell under our own observation at Pæstum. In making some slight excavations near those glorious old temples—

"They stand between the mountains and the sea;
Awful memorials, but of whom we know not!"*

that were ancient edifices before the time of the first of the Cæsars, the workmen discovered a great many female figures beautifully executed in fine clay, or terra cotta, and the costume of these figures, which must have been lying buried at that spot for some two thousand years, was the same, without the slightest variation, as the dress of the living female peasantry of the district. Thus in traversing the country which was anciently

* Rogers's 'Italy.'

the abode of the Lucanians, the Brutii, the Apulians, the Samnites, the Volscians, the Latini, the Veians, &c., the traveller may fancy that the thin and scattered population present to the eye nearly the same appearances as the occupants of those regions presented to their Roman conquerors centuries before the Christian era; may, in the midst of ruined temples and amphitheatres, aqueducts and tombs, flatter his imagination that all things have not perished under the tooth of time; that the most ancient customs have been preserved, in spite of foreign conquests, wars, and devastations; the heart and affections of man, his predilections and habits being so much stronger than the strongest work of his hands.

In the present design, Pinelli, as he usually did, unites a custom with costume. The little children in the basket, carried on the heads of the two female peasants, who might pass for Roman wives of the time of Cornelia, the mother of the Gracchi, are placed and carried in a manner peculiar to one or two districts only of the Campagna of Rome. At least we never observed the curious practice in any other part of Italy. The baskets made of osiers that grow by the yellow Tiber, or the streams with classical names that fall into it, or that in too many cases run wild over the solitary waste, to form the Pontine marshes and malaria, are lined inside with rough cotton or uncombed wool, that the little bantlings may lie softly and comfortably, while, to prevent their throwing themselves out, the basket is crossed at the top by narrow bands of platted straws or small osiers. The little urchins, in short, are secured nearly in the same way as our stone jars are secured in hampers. With her infant on her head in one of these curious baskets, a *paesana* will trudge for miles to fair or market, or to take part in the labours of the field, much too large a portion of which falls to the females in Italy; or to tend the flock, or to go to mass on a Sunday or saint's day. We have seen them, when the infant has been sleeping and perfectly still, take their distaffs from their girdle, and go along spinning and singing, balancing the basket on their heads without any help from the hands, and apparently without any exertion. Water is nearly always carried home from the fountain or the rivulet in the same manner; and then the hands are never used except to put the vase or vessel upon the head. The women of India have this last fashion of carrying water; and various English artists have delineated their graceful elastic forms, and the easy and seemingly instinctive way in which they balance and carry their large light vessels. In the south of Italy these vases are often found of the beautiful, the graceful, and truly antique forms; and nothing can exceed the ease and gracefulness of some of those who are seen bearing them. The material is generally of the coarsest kind; but would that our Staffordshire potters adopted their elegance of forms!

There was one fine young woman that we used frequently to notice at Rome some years ago. She was what they called, in their language, which calls almost everything by a fine or sonorous name, a 'Corriere,' or Courier, her occupation simply being to bring letters, or messages, or small parcels, or a basket of fowls or quails, as it might be, from a village at the foot of the hills, an offset of the Apennines, and to carry back from Rome other letters, messages, or parcels. She was, in short, postwoman and carrier united, and the only medium of communication between her lonely village and the eternal city. Twice or thrice a week, under the burning sun of July, or under the deluge-like rains of September, this hard-toiling woman made two journeys a week to and from Rome, her village being some sixteen or eighteen miles from the city, and always she carried her last-born child in the basket on her head, disposing of all her other articles in a light open wicker baket which she carried in her hand. The poor creature (but we doubt whether the term ought to be applied to one possessed of ruddy health, a laughing eye, a most buoyant and queen-like step, and a look that seemed to say, 'Labour is light when we toil for those we love') used, on arriving at the city, to suckle her child by one of the gates, then leave it in charge of an old woman, and go and execute all her little commissions. Generally, in the evening of the same day she was seen taking her departure, loaded as she came, with her little one on her head, her wicker basket in her hand, and the traveller's benison going with her—"May the blessed Virgin accompany thee on thy road!"

## THE LONDON CANALS.

[Concluded from page 325]

At the hour of six or seven in the evening the scene which we have just described is presented in its busiest phase. As a general rule, all merchandize received during the day is dispatched by boat the same night; and as the goods are not brought to the wharf until toward evening, all the operations of loading and unloading are then carried on with great celerity. Each waggon, as it arrives, draws up by the side of the raised platform; the crane is set to work, the packages and boxes are taken out; the clerks and warehouse-keepers prepare the requisite entries and invoices; the goods are wheeled across the platform to the edge of the canal; and the boatmen assist in stowing them away in the boats. There may be half-a-dozen boats dispatched in the same evening, all to be filled subsequent to the arrival of the laden waggons at the wharf at five or six o'clock. It is from this circumstance that nearly all the fly-boats leave the wharf late in the evening—sometimes at midnight—after the busy operations of the day are completed. The 'captain,' or chief boatman, receives orders as to its destination and proceedings; and he consigns the goods to the managers of the establishments at the country towns, from whence the goods are forwarded to the consignees.

Let us, as a further exemplification of the nature of canal traffic, suppose that a Manchester manufacturer forwards a cargo of cottons to London by canal through the same agency. They are placed in charge of Messrs. Pickford's agents at Manchester, by whom they are dispatched to London in a fly-boat; daily information being conveyed from the country agent to the town establishment of the nature and extent of the consignments. The boat arrives at the City Road basin, generally in the evening or during the night; and it remains untouched till the business hours of the next morning. It is then drawn up to the side of the 'discharging warehouse,' where a crane speedily removes the cargo. Each package, after being weighed, compared with the invoice, &c., is placed in one or other of several separate groups. These groups do not relate to the places whence the goods have been brought, or the barges by which brought, but to different districts in London, and to the waggon or waggons going to those districts. All the boats which may have arrived since the preceding morning are thus unladen, the contents classified, and waggons drawn up for this purpose to the side of the 'discharging warehouse' are laden, each one with the packages consigned to one particular district. The waggons are then dispatched, and the boats wait till a return cargo is ready.

It may easily be imagined that as every package is registered in books and invoices, bills and other documents, with great strictness, the amount of business transacted during the morning and evening is very extensive; while the middle of the day is occupied by

other transactions of a general character. Sometimes a package, or cargo of packages, is directed to be warehoused at the wharf till called for; and for the accommodation of these a large area of ground is appropriated. In walking through these warehouses, goods of a multifarious character may often be seen, according to the circumstances of trade at the moment; Cheshire cheeses, bales of cotton goods, spades, barrels of ale and cider—indeed, all kinds of commodities are occasionally required to be warehoused for short periods, each warehouse being devoted to a particular class of goods.

As the waggons and horses for the land transit belong to the firm, so do the boats also. Each boat is managed by three or four men and boys, of whom one is the principal, and is called the 'Captain' of the boat. Into his charge is placed the cargo; he receives a certain sum for navigating the boat a certain number of miles, and out of this sum he pays his assistants. The proprietors fit up the little cabin which serves for 'parlour and kitchen and all;' but the men supply their own provisions. The open barges which are to be seen on the Regent's Canal do not belong to Messrs. Pickford, they are the property of the merchants who deal in coal, stone, slate, and other heavy materials, and who have wharfs on the banks of the canal and its basins. Most of the coal is brought from colliers lying in the Thames, through the Limehouse basin into the canal; but some is brought down the canal from the Midland Counties; as is also a considerable quantity of stone, lime, &c.

The period at which this article was written enables us to offer a word of information respecting the 'Annual Stoppage' on canals. It may readily be conceived that in an undertaking involving so diversified an assemblage of parts, so incessant a wear and tear, as a canal, repairs and reconstructions must be required at intervals. The locks may become out of repair; the brick-work of the tunnels and bridges may be defective; the bed of the canal may be choked with sand and silt at particular parts; the steam-tug may require overhauling; the barges and fly-boats may need inspection—in short, a general supervision may become necessary. Many such repairs as these require that the canal should be emptied of water at particular spots; a course which causes a temporary cessation of the customary traffic. In order, then, that this stoppage may produce the least amount of inconvenience to canal carriers and the commercial world generally, the directors of most English canals select the same period of the year for the annual examination, dredging, and repairing. During the second week in June, for example, in the present year, the Regent's Canal, as well as many (we believe most) others throughout England, was 'stopped.' Whoever, during that week, happened to visit the canal near the eastern end of the Islington tunnel, or near the gasworks at St. Pancras, or near the locks at the Hampstead Road, might have seen the canal nearly dry at those parts, and men busily engaged in digging out mud and sediment which had been found to impede the navigation. A portion of the canal is in such case cut off from communication with the main line, by a barrier of boards placed across it at either end, and the contained water is drawn off. Where it can conveniently be done, the barrier is fixed under one of the bridges, or in some other part where the canal presents a small width, in order to facilitate the adjustment of a vertical water-tight system of boarding. The water is drawn off by siphons and steam-engines, and the enclosed area, on the principle of a coffer-dam, is kept empty until the repairs are completed. The barriers are then removed, and the water from the higher parts of the canal flows in to fill up the void. The whole arrangements are so planned as to enable the commencement and the termination of the stoppage to take place at appointed days; and since the canal traffic is necessarily suspended during this period, an accumulation of business ensues, which gives rise to a scene of great activity immediately on the termination of the stoppage.

## ON RIVERS, GEOGRAPHICALLY CONSIDERED.

Rivers are the flowing waters, which bring to the sea, and sometimes to a lake, the waters which are collected within a certain portion of the earth's surface. The country which is thus drained by a river is called its *basin*, as the river runs in the lowest part of it, and the country rises on all sides with greater or less steepness, in the fashion of the sides of a basin. The margin of such a basin generally lies contiguous to the basin of another river, and thus constitutes the boundary-line of the two basins. From these margins the waters descend on both sides towards their respective basins, which are separated by them, and hence the whole line of these margins is called a *watershed*.

The basins of rivers vary greatly in size. A *brook* is the name commonly given to rivers of the smallest description. When such a river rises near the sea or near a large river, into one of which it flows after a short course, it consequently drains a very small surface. If the waters should be increased by those of another brook, the name of brook is changed for that of *rivulet*. The basin of a rivulet is therefore more complicated than that of a brook. One or more brooks descend from the margin of the basin, and by uniting their waters with those of the rivulet, increase its volume. When several rivulets unite and so produce a considerable volume of running water, this water-course takes the name of *river*. But all such rivers do not reach the sea or even a lake; most of them join other rivers, and thus a large river is produced. This last-mentioned large river is called the *principal river*, and those which increase its waters are called, with respect to it, *affluents* or *tributaries*, and sometimes *feeders* or *branches*.

The first waters of a river are generally derived from a spring, which breaks out at the foot of a declivity, or on the side of some hill or mountain; and sometimes from a swamp or a lake. This is called the *source* of a river. From this source the river descends through the lowest part of its basin until it terminates its course in the sea, a lake, or another river, and this termination is called the *mouth* of the river. The cavity in which the running water flows is called the *bed* of the river, and the solid land which bounds this bed is called its *banks*.

It was formerly thought that the elevation at which a river originates must be in proportion to the length of its course, and accordingly geographers assumed that there are elevated mountain-ranges in those regions where large rivers take their rise; but modern researches have shown that this is not always the case. Thus the Volga, which is the largest river of Europe, and runs above two thousand miles, rises in a district the most elevated part of which does not exceed 1100 feet above the sea; and the Mississippi, which is still larger, originates in a tract which can hardly be called hilly, and at an elevation probably not much exceeding 1500 feet above the sea.

But still most large rivers have their origin in very elevated mountains or on high table-lands, in descending from which a great difference with respect to the rapidity of their course and the nature of the country

through which they flow, is observed. Accordingly geographers divide the whole of the course of such rivers into three divisions, the *upper*, *middle*, and *lower* course.

The *upper* course of such a river lies within a mountain region, and its source is consequently at a great elevation above the sea. The waters run with greater or less velocity, according to the greater or less extent of the mountain-region, and the greater or less rapidity with which the whole region declines towards the country to which the course of the river is directed. When the elevation of the mountain-region decreases with great rapidity, the current of the river is extremely rapid, and presents a quick succession of cataracts and rapids. The force of the current is so great that pieces of rock of considerable size, which are frequently detached from the overhanging masses, cannot resist it, and are carried down by the current, until they reach a point where the rapidity of the descent begins to diminish. The mountains which constitute the banks of the river often rise several thousand feet above it, and their bases are united by slopes forming an angle, over which the water runs on bare rocks, without the least covering of earth. Thus the river does not flow in a valley, but in a cleft or ravine, which cuts deep into the mountain masses. Sometimes there is space enough for a path between the river and the mountains, but in many places this space is only obtained by artificial means, as by cutting away a projecting portion of the rock, or by making a tunnel through it. Where either of these means cannot be applied, the path is continued over the bed of the river by a wooden bridge of greater or less extent, until a place is reached which offers sufficient space for a path on the sides of the rocks. The course of the river is generally in a straight line, but sometimes it makes short and abrupt bends which form acute angles. In the last-mentioned case it is, almost without exception, observed, that the mountains which enclose the river have on one side a projection, and on the other a receding, which correspond so exactly that if it were possible to unite both mountains, the projecting would exactly fit into the receding part. This peculiarity in the formation of the ravines of mountain-streams was observed by the Spaniards in the Andes of South America, who called them *quebradas*, or broken; by this term tacitly assuming that the phenomenon had been caused by a violent disruption of the mountains. This description of mountain-streams and their ravines applies particularly to those of the western Alps along their southern declivity, to those rivers which constitute the upper branches of the rivers Doria and Sesia, to the valleys of Anzasca and Vedro on the southern side of the great road of the Simplon, and to the still larger valley of Aosta, through which the road leads from Switzerland to Italy over the mountain-pass of the St. Bernard. The military road of the Romans was made through the Val d'Aosta; but in these parts it was only practicable for beasts of burden. Such deep ravines not only occur between the gigantic elevations of a high range, but likewise in the elevated table-lands. Humboldt observes that the Plain of Quito, which is nearly ten thousand feet above the sea, is intersected by ravines, which in some places sink so deep that their bottoms are hardly more than two thousand feet above the sea-level; and he adds that some of them are so narrow as not to contain the smallest cultivable space. Similar ravines intersect the table-lands of Guatemala and Anahuac, where they are called *cañadas*.

When the mountain-region through which the upper course of a river lies descends with less rapidity, and consequently occupies a much greater extent of country, the mountain-streams, as well as their banks, present very different features. Both the streams and the banks show that the descent of the whole mass is not by a regular slope, but is formed by an alternation of plains and declivities; in ascending such a mountain-stream, it is found that in certain places the rocky masses approach so near to the banks, as to leave hardly room enough for the river, and in these narrows the current is extremely swift, and generally a continual rapid, interrupted by falls of moderate height. These narrows, however, rarely extend more than a few miles. Above them the mountains recede to some distance from both sides the river; and thus a basin is formed, in the middle of which the river flows with a comparatively slow current, not over bare rocks, but over a gravelly bed, and between low banks of earth. The bottom of the basin is level, or descends with a gentle slope, and may be cultivated or used as pasture-ground. In some of the rivers which descend from the central and eastern Alps this alternation of narrow passes and basins occurs several times. Thus the Reuss, along which the great road runs which leads over the mountain-pass of St. Gothard, rushes with incredible velocity through the ravine of the Hospendal, and falls one thousand eight hundred feet before it reaches the basin of the valley of Ursern, which is nearly eight miles long and more than half a mile wide, and in which it runs with a gentle course. At the northern extremity of the valley of Ursern the river enters the second narrow at the Urnerloch. This narrow, which extends about three miles to Geshinen, is extremely contracted, and within these limits the river descends one thousand and seventy-four feet, forming a succession of small cataracts. Below this is the basin of the Krachenthal, which is not so wide as that of Ursern, and about six miles long. The course of the river within this basin is rapid, but there are no cataracts. From this valley the river escapes by the third narrow, which is about four miles long, and also very contracted: it terminates at the village of Am-Stäg, where the Reuss enters the valley of Uri, in which it flows until it mingles its waters with those of the lake of Uri (Urner-see), as the southern part of the Vierwaldstädter-see is named. The same conformation is observed in the southern declivity of the Alps, where the river Ticino descends from the mountain-pass of St. Gothard. This river runs in a ravine from the Hospendal to Airolo, in which it descends about two thousand eight hundred and eighty feet. It then enters the upper valley of Leventina, which is about seven miles long and half a mile wide, and in which the river is rapid, but has no cataracts. It issues from this valley by a narrow about two miles long, between Il Dazio and Faido, where a series of beautiful waterfalls occur, and the ravine is so narrow that an artificial road has been cut on the adjacent mountain called the Platifer. At Faido the Ticino enters the middle valley of Leventina, in which it flows with great rapidity to Giornico, a distance of about fifteen miles, but without forming any falls. The valley is less than half a mile wide, and often interrupted by rocks. Above Giornico the river enters a short narrow, at the outlet from which it forms cataracts, and then reaches the wide valley called the Lower Valley of Leventina, in which it flows with a comparatively gentle course to Lago Maggiore. The greater number of the rivers which originate in the Alps and Pyrenees are of this latter description. The basins which occur in these river-valleys may at some remote period have been filled with water, and this may have been drained off by the rivers forming an outlet for the waters by the narrows which now connect their basins with one another.

[To be continued.]

[Cassiobury.—From an original Sketch.]

## RAILWAY RAMBLES.

### CASSIOBURY.

Once more we find ourselves among the throng of persons who are fast settling themselves into the different carriages of the train about to start on the Birmingham Railway; many, no doubt, hastening like ourselves to enjoy the breezes of the country, which, sweeping occasionally across the metropolis, invite us so wooingly forth. Carriage after carriage is filled, and still more are in requisition; and one cannot but admire the ingenuity of the contrivance by which, in the midst of so much bustle, the carriages, as they are wanted, are brought along a short rail extending from the principal rail at right angles, till they are in the middle of the latter, when there is a pause, and, lo! the whole floor with its rails turns round, and the carriage is in due position ready to attach behind us. A goodly row of carriages now formed, we are starting, and after a short run with the assistance of the engine and rope, the locomotive is attached. Gently at first does it move; putting forth its mighty powers as with a consciousness of the necessity of gentleness in their exercise; but the pace rapidly increases, and we are presently flying along, some twenty-five miles an hour; and dull must be the soul that in ordinary circumstances can feel none of the exhilarating influences of the speed, and of the consciousness that all the means by which it is produced are the product not merely of the skill and enterprise of our own age, but of our own day; that the very men who have been the chief artificers of these great works are yet moving among us, and still busy in their vocation.

Cassiobury, or Cashiobury, for the word is spelt both ways, is our present destination, so we stop at the Watford Station, and ascend to the bridge which here crosses the railway, and pursue our route along a delightful road, which, but for its breadth, might be called a green lane, so embosomed is it in trees, and so luxuriant the foliage, flowers, and fruit of its hedges. A curious effect of the establishment of the railway station here is noticeable as we stand a moment on the bridge we have just mentioned; we count six houses in all, scattered about, and of these five are public-houses newly erected. After a walk of about a mile, the lodge appears directly facing us, stretching across a corner in the road. It is an interesting and antique-looking edifice, with mullioned windows, half overgrown with ivy, and terminating on one side in a little steeple like that of some very rustic church, and on the other with a square battlemented tower pierced by narrow slit-holes. Roses are clustering over the latter, and it is pleasant to reflect that the times have passed away when there might be any danger of disturbing them. The noble park now opens upon us as we step through the lodge gates, clump upon clump, wood upon wood stretching far away into the distance, where the eye rests upon gleaming waters. Instead of following the carriage road, which pursues a somewhat circuitous course to the mansion, we take the footpath to the right; and scarcely have we ceased to admire some of the many noble trees which we meet at every step, or the masses of graceful fern, that most beautiful of vegetable forms, before a glimpse of turret towers is caught through the trees, then lost again, and then again seen still more plainly. The path now winds round a thick shrubbery close to the mansion, which shuts the whole out from our view; and that past, the entire building is before us, in all the splendour of Gothic architecture: here used in the adornment of a building presenting the mixed ecclesiastical and castellated styles. The adoption of the former in the wing nearest to us, giving to the whole the exact appearance of a beautiful chapel, is hardly fair, or perhaps even, closely considered, in good taste; for this simple reason—there is no chapel in the building; the interior of what appears to be the chapel being appropriated to uses of a domestic nature. There was a chapel here, and which, we presume, was pulled down with a great portion of the edifice generally, about the year 1800, when Mr. Wyatt, under the direction of the late earl, rebuilt Cassiobury; but we repeat there is none now, and after admiring the part of the exterior in question, and investing it with all the associations natural to its appearance, one feels inclined to resent its very existence, on finding there is nothing within of what we had a right to expect. It may perhaps mollify the antiquarian who had visions of rich brasses, and quaint but most provokingly half-illegible inscriptions, to point out in the porch beneath the beautiful window of this apparent chapel, an oaken door literally covered with rich carving, including a row of portraits, from the cathedral of Beauvais in France.

The entrance vestibule is airy, light, and beautiful, yet at the same time not without an antique expression; for the range of windows extending upwards almost from the floor directly opposite, and opening into a little court or formal garden, are richly stained, and above wind to and fro the beautiful lines, with little knots or bosses, of the groined roof. From a notice affixed to the wall, we perceive how far ex-

tends the liberality of the owner of Cassiobury. It appears that there are two days (Mondays and Thursdays) on which the public have free admittance to view the house, the gardens, the park, and the Swiss cottage; and, further, that by obtaining an order from the earl or from the housekeeper, the latter readily obtainable on application at the time, parties may bring refreshments, and thus spend an entire day if they please in enjoying a place which has cost its owners an immense expenditure of time and money to produce, and still requires a great annual expenditure to preserve. Trophies of the chase, and a few curiosities suitable to the place, are hung around the walls or spread along the tables. From the vestibule we step immediately on the right into the dining-room, and commence our examination of the chief treasures of Cassiobury—its pictures. Among the contents of this room is a portrait of the Earl of Northumberland, by Vandyke. It was copied in 1806 by Mr. Phillips, and at the same time cleaned, when a curious evidence of originality was discovered: the truncheon, now in the earl's right hand, was found to have been originally in a different direction. To another department of art, in which Cassiobury is pre-eminently wealthy, fine carvings by the finest of carvers, Gibbons, this room also introduces us. The pictures are mostly set in a frame-work of this beautiful nature, where all kinds of still-life are represented with a vivacity of effect and delicacy of execution truly marvellous considering the material. One of the most interesting of the pictures in the dining-room is that representing the widow and two children of the Lord Capel who was beheaded by parliament. As this nobleman is a direct ancestor of the present family, and him from whom they derive their elevation to the peerage, we may here notice briefly the history of Cassiobury, and the connexion of the Capels with it.

Cassiobury is said to derive its name from Cassibellaunus, king of the tribe of ancient Britain called the Cassii, and was then a place of importance, probably the prince's seat. In the time of the Saxon kings of Mercia, we know it to have been a regal residence, and it was by Offa that it was ultimately given to the neighbouring monastery of St. Albans. It was then for a time called Albaneston, but after the Conquest the Normans restored the old associations in calling it Caisho, since converted into Cashio, and the name applied to the hundred. After the dissolution, the manor was granted to Richard Morison, Esq., by Henry VIII.; a gentleman frequently employed in state affairs, and who died at Strasburgh, in 1556. The erection of the mansion here was commenced by him, and completed by his grandson, Sir Charles Morison, Bart., who was created a knight of the Bath at the coronation of Charles I. The daughter of Sir Charles married Arthur Capel, the first Lord Capel of whom we have spoken; and thus the estates passed into the present family. These had long had their seat at Stoke Neyland, in Suffolk. Sir William Capel, a citizen of London, was Lord Mayor in 1503, and one of the victims of Henry VII.'s tender inquisitors, Empson and Dudley. He paid a fine of 2000*l.* they levied upon him at one time; but when, after some years, they made a similar application, the worthy citizen thought it "too bad," and resisted, and though they imprisoned him, they could not change his determination, so he remained in his dungeon till the king's death. His son George Capel, knighted in the early part of the reign of Henry VIII., accompanied that sovereign in his French expedition, and was one of the chosen party of knights who there challenged all comers for the space of thirty days. These were the immediate ancestors of Arthur Capel, first Baron Capel of Hadham, and who received his patent of nobility from the hand of the man in whose service he was to fall, Charles I. On the breaking out of the civil war, he raised some troops of horse, at his own cost, and joined the royal standard, although, like many other of Charles's adherents, he had previously shared in the measures of the popular and parliamentarian party. He was engaged during the struggle in some battles, and many skirmishes, till the royal party became utterly annihilated, their armies beaten and dispersed, their garrisons taken or surrendered. He then compounded with the parliament, and so virtually acknowledged its power and authority: after which he retired to his manor of Hadham; and there, in strict honour, he should have remained. To save his estates, he left the position of an enemy, and took up one which, as far as acts were concerned, entitled the parliament to demand should be that of a friend. Hence perhaps his melancholy fate, when, having waited but for the first favourable moment, he once more reared the standard of king Charles, then in captivity, and forming a junction with the troops of Lord Goring and Sir Charles Lucas, aided in the memorable siege of Colchester, where the parliamentarians were for the long period (in such circumstances) of two months baffled in their efforts to take the place by the courage of the garrison in resisting the direct assaults of the sword and the indirect but still more fearful inroads of hunger and privation. The obstinacy of the garrison, however, may partly be attributed to the leaders, who knew that they had been denounced as traitors by the parliament, and who anticipated a traitor's death; which Fairfax's conduct in refusing any terms but unconditional surrender made but too probable. Submit, however, they did at the last extremity, and Sir Charles Lucas and Sir George Lisle were immediately shot by Fairfax, whilst Goring and Lord Capel were committed to close prison. The latter has left some verses descriptive of his feelings and sentiments at this gloomy period, when the stream of events was hurrying on to that tremendous conclusion, the execution of a king by his people. The following lines have an air of calm resignation that it is interesting to contemplate:—

"That which the world miscals a jail,
A private closet is to me;
Whilst a good conscience is my bail,
And innocence my liberty.
Locks, bars, and solitude, together met,
Make me no prisoner, but an anchoret."*

His royal master preceded him to the scaffold, and the event, while it made more certain his own doom, prepared him the better to endure it. In February following, he, with the Duke of Hamilton, Lord Goring, and Sir John Owen, were tried by the High Court of Justice sitting in Westminster Hall. Lord Capel pleaded that he was a prisoner of war only to Lord General Fairfax, and had had conditions, including his life, promised him at Colchester; but he seems to have been unable to convince his judges of any such promises, and was, with the others, condemned to death. Before execution, two of the number, Lord Goring and Sir John Owen, were respited, and saved, and another, Lord Holland, added to the fatal list; and the three, Hamilton, Capel, and Holland, were beheaded on the 9th of March on a scaffold erected in Palace Yard. Capel seems to have been the only one who had much of the popular sympathy. His resolute behaviour led to the circulation of the following couplet, in connection with his armorial bearings:—

"Here lion-like Capel undaunted stood,
Beset with crosses, in a field of blood."

* 'Gentleman's Magazine,' 1757.

[To be continued.]

## ON THE WEAR OF GOLD AND SILVER COINAGE.

That we do not feel the full importance of annoyances until they fall upon ourselves, is a truism which need hardly be insisted on, but which is nevertheless often forgotten. The recent discussions and delays respecting 'light sovereigns' have directed the attention of many persons for the first time to the natural causes whereby coin must necessarily become somewhat lighter in weight as it is more extensively used, even without the contingency of malpractices on the part of dishonest persons. Respecting the nature and extent of this diminution, and the experiments made on the subject some years ago, a few words may not be misplaced.

We are not aware that any distinct experiments were made to determine the diminution in the weight of coins by abrasion, until the year 1787, when the officers of the Mint investigated the average state of the silver coins at that time. According to these experiments it appeared that

| | | As issued from the Mint. |
|---|---|---|
| 12 4/10 Crowns, or 27 Half-crowns, or 78 1/10 Shillings, or 194 3/10 Sixpences, | were requisite to make up a pound troy, instead of | 12 4/10 Crowns, 24 8/10 Half-crowns, 62 Shillings, 124 Sixpences. |

These coins were allowed to run the average career of the silver coinage for the next eleven years, and were then, in 1798, again examined. It was found that the weights had been still further diminished, particularly in the smaller coins, insomuch that

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| 12 33/40 Crowns, or 27 11/40 Half-crowns, or 82 9/40 Shillings, or 200 37/40 Sixpences, | were required to make up a pound troy, instead of the numbers given above. |

It was thus shown that in eleven years the coins had suffered, in round numbers, the following loss:—crowns 1/4 per cent., half-crowns 2 per cent., shillings 5 per cent., and sixpences 3 per cent.; while the whole diminution, from the time of coinage, amounted to—crowns 3 per cent., half-crowns 10 per cent., shillings 24 per cent., and sixpences 38 per cent.

It must not be understood that the above forms anything like a general average of the effects produced by the abrasion of coins; indeed the glaring magnitude of the deficiency was the circumstance which called attention to the matter. Still the elements of destruction are always at work, and the government were desirous of obtaining the aid of the Royal Society in determining the causes and the extent of loss by abrasion, not so much in the silver as in the gold coinage, whose superior value made the subject one of increased importance. A committee of the Privy Council was appointed in 1798, "to take into consideration the state of the coins of this kingdom, having among other circumstances remarked the considerable loss which the gold coin appeared to have sustained by wear within certain periods, and being desirous to ascertain whether this loss was occasioned by any defect, either in the quality of the standard gold, or in the figure or impression of the coins." The committee requested Mr. Hatchett and Mr. Cavendish, on the part of the Royal Society, to institute a series of experiments on these matters; and those two gentlemen were engaged from the latter end of the year 1798 to April, 1801, in conducting investigations at the Mint. The report of the results occupies a hundred and fifty pages of the 'Philosophical Transactions' for 1803, but we can here, of course, only briefly mention the conclusions arrived at.

The questions submitted for investigation were principally these two:—1st, "Whether very soft and ductile gold, or gold made as hard as is compatible with the process of coining, suffers the most by wear, under the various circumstances of friction to which coin is subjected in the course of circulation?" 2nd, "Whether coin with a flat, smooth, and broad surface, wears less than coin which has certain protuberant parts raised above the ground or general level of the pieces?" To answer these questions, Mr. Hatchett and Mr. Cavendish deemed it desirable to determine the effect which various alloys produced on the qualities of fine gold; how far the specific gravity is effected by the alloys, and to what extent the nature of the alloy and the form of the piece influenced the abrasion by friction.

Gold was alloyed respectively with arsenic, antimony, zinc, cobalt, nickel, manganese, bismuth, lead, tin, iron, platina, copper, and silver, with a view to determine which alloy gave to the gold those qualities best fitted for the purposes of coin. Arsenic, and many of the other alloys, evaporated to some extent during the art of combination; while others of the alloys produced a compound metal too brittle or too soft for coin, or else badly coloured. The experimenters concluded that "the whole of the experiments tend to prove, that (agreeably to general practice and opinion) only two of the metals are proper for the alloy of gold coin, namely silver and copper, as all the others either considerably alter the colour or diminish the ductility of gold." The worst metals for the alloy were found to be bismuth, lead, and antimony.

The next experiments were on the specific gravity of the alloyed gold, and the causes which led to changes in its amount. This was an elaborate investigation, and ended in results which are in a scientific point of view very valuable; such as the effect of sand-moulds and iron-moulds in casting ingots; the unequal mixture of the heavy gold and the lighter alloy in the melting-pot, and numerous minute particulars important to the operations of the Mint.

The last series of experiments related to the effects of friction in wearing away gold coins, and were intended to decide the question as to which alloy renders gold most durable. Twenty-eight pieces of gold were fixed in a frame, over which was placed another frame containing twenty-eight similar pieces; and the upper pieces were made to rub to and fro in the lower ones, with a pressure of a certain amount. The pieces were alloyed differently, and the object was to determine which alloy withstood best a given amount of friction. Standard gold pieces, and afterwards pieces containing one half of copper, were rubbed to and fro 573,380 times; and on subsequent weighing, it was found that the former had lost less by friction than the latter. It was further ascertained that 'fine gold,' that is, almost pure gold, suffered less than gold alloyed by copper and tin, or copper and iron; but that standard gold (viz. 22 parts of pure gold to 2 of alloy) resisted friction better even than fine gold. The coins were next subjected to a different ordeal: they were placed in a square box, rotated on its axis, so that the coins rubbed against each other in every possible way. Into the box were placed forty pieces of 'fine gold,' forty made standard by silver, and three other sorts of forty each, made standard respectively by silver and copper, fine copper, and common copper (the term 'standard' implying 1/12ths of pure gold.) It was found after the box had been rotated 71,720 times, and the various pieces had rubbed against each other indiscriminately, that the alloy of silver and copper, such as is actually used in English coinage, was more durable, or less diminished by abrasion, than the fine gold, the gold alloyed with silver alone, or that alloyed with copper alone; the loss in the first-mentioned instance being about 1/210th part, and in the second about 1/70th part.

The entire results of the experiments made by Hatchett and Cavendish led to the conclusion that the standard adopted in the English mint is, on the whole, one of the most durable that could be chosen, and that the diminution in weight, by long-continued friction, is very inconsiderable.

In 1807 the officers of the Mint made an investigation, not into the respective qualities of different alloys for coin, but into the actual loss which the current coin had suffered in a given time. One thousand guineas were procured from a banker's and weighed; 686 were found of full weight, and 314 light; the deficiency on the whole 1000 was two ounces and eleven pennyweights, being at the rate of about 19*s.* per cent. Of 100 guineas collected at a retail shop, about half were under weight, and the deficiency on the whole was about 23*s.* per cent. Of 600 half-guinea pieces, collected at a banker's, more than three-fourths were under weight, and the average loss was nearly two guineas per cent. On 300 seven-shilling pieces (a coin used at that time to a limited extent) the loss was only about 17*s.* per cent. Mr. Jacob, from considerations which he explains in his 'History of the Precious Metals,' assumed that the gold coins thus experimented on had on an average been in fair circulation, passing from hand to hand in the usual manner, for a period of about ten years; and, from further considering the proportion which the half-guineas bore to the guineas, and the relative wear of each, he states his belief that the average *annual* loss of the coins by abrasion consequent on the usual commercial dealings, was about $\frac{1}{930}$th part of the whole.

In 1826 the officers of the Mint made a further investigation, to determine the amount of wear in gold and silver coins coined subsequently to 1816. It was found that on three hundred pieces of money the *dirt* amounted to from 7 to 22 grains, the largest quantity being on the half-crowns, and the smallest on the half-sovereigns. It was next found that in sovereigns and half-sovereigns of 1817 the loss had been respectively 4*s.* 6*d.* and 5*s.* 7*d.* per cent.; and on those of 1825 (one year old) 1*s.* 3*d.* and 2*s.* 9*d.* per cent. The half-crowns, the shillings, and the sixpences of 1816 coinage, had experienced losses of 20*s.*, 46*s.*, and 75*s.*, per cent. respectively; while those which had been but one year in use showed a deficiency of 1*s.* 5*d.*, 4*s.* 11*d.*, and 7*s.* 2*d.* per cent. Mr. Jacob, after investigating the state of the currency at that period, in reference to cash payments, expresses an opinion that the coins here experimented on had, on an average, been in active service about two years and a half; from which he estimates that the yearly depreciation was about $\frac{1}{930}$th part. This proportion is larger than that of $\frac{1}{930}$th, estimated in the former instance: but this may be owing to the fact that the average annual wear for two years and a half is greater than that for ten years; because it has been found that sovereigns lose more in the first year than any subsequent year, probably on account of the numerous sharp projecting points of the device.

As respects the silver coinage Mr. Jacob estimates, both from the experiments of 1798 and those of 1826, that the average annual loss on the silver coins in common use is at least $\frac{1}{160}$th part, by abrasion, being a ratio four or five times as great as that on gold. Indeed he quotes the opinion of a gentleman very conversant with manufactures in metal, to the effect that the loss is much more:—"The loss on coined silver is full one-hundredth part, or one per cent. per annum. If one hundred pieces of 1815 and 1816 and upwards to the last date on the silver coin be examined, it will give this result." Though this loss is much greater than on gold, it is easily accounted for: for first, the same degree of friction will produce a greater diminution of weight; and secondly, the constant and never ceasing circulation of the silver coinage far exceeds that of gold, since it never will be hoarded or kept in a state of rest, it not being a measure of value in this country, but a token or representation of value.

As a means of placing the results in a clear form, we will take an intermediate value between the two estimates ($\frac{1}{930}$ and $\frac{1}{160}$) for gold coin, and call the ratio $\frac{1}{930}$; and use $\frac{1}{160}$ as a mean between the two ratios for silver ($\frac{1}{200}$ and $\frac{1}{160}$). Then we might put the case in this form:—that if we take 900 gold coins, sovereigns for instance, weigh them, then let them circulate in furtherance of English traffic with average rapidity for twelve months, and lastly weigh them again, they will be found reduced in weight to about 899; and that if we similarly circulate 150 silver coins, such as shillings, their weight will be reduced to about 149. The difficulty of forming a judgment in this matter is extremely great; and Mr. Jacob gives his results as only such approximations as he could venture to offer. We are not aware whether any investigations are now being carried on by the officers of the Mint on this subject; but the present time seems to be peculiarly fitted for such an inquiry.

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*Pulla Fishery on the Indus.*—A large, light, and thin earthen vessel of the strong and unequalled pottery of the Indus clay, so thoroughly baked, forms the fisherman's float: it is fully four feet in diameter, and about thirty inches high; of a very flattened form, and exceedingly buoyant. On this the fisherman balances himself on his stomach, covering the short neck and small aperture at top; and launching himself forth on the current, paddles with his legs behind to steer his course, drifting with the stream, and holding a pouch-net open to receive the prey, which, when caught, he deposits in his reservoir, the vessel he floats on.—*Kennedy's Sind and Cabool.*

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*The Orchidaceæ.*—One class of plants, which, though it has lately become most fashionable, and cultivated by an almost separate clique of nurserymen and amateurs, cannot yet be said to rank with florists' flowers, is that of the Orchidaceæ, trivially known, when first introduced, by the name of air-plants. It is scarcely more than ten years ago that any particular attention was bestowed upon this interesting tribe, and there are now more genera cultivated than there were then species known. Among all the curiosities of botany there is nothing more singular—we had almost said mysterious—than the character, or, to speak more technically, 'the habit' of this extraordinary tribe. The sensation which the first exhibition of the butterfly-plant (*Oncidium papilio*) produced at the Chiswick Gardens must still be remembered by many of our readers, and so wonderful is the resemblance of the vegetable to the insect specimen, floating upon its gossamer-stalk, that even now we can hardly fancy it otherwise than a living creature, were it not even still more like some exquisite production of fanciful art. Their manner of growth, distinct from, though so apparently like, our native misletoe, and other parasitical plants—generally reversing the common order of nature, and throwing summersets with their heels upward and head downward—one specimen actually sending its roots into the air, and burying its flowers in the soil,—living almost entirely on atmospheric moisture,—the blossoms in some species sustained by so slender a thread that they seem to float unsupported in the air,—all these things, combined with the most exquisite contrast of the rarest and most delicate colours in their flowers, are not more extraordinary characteristics of their tribe than is the circumstance that in nearly every variety there exists a remarkable resemblance to some work either of animate nature or of art. Common observation of the pretty specimens of this genus in our own woods and fields has marked this in the names given to the fly, the bee, and the spider-orchis; but in the exotic orchises this mimickry is still more strongly marked. Besides the butterfly-plant already alluded to, there is the dove-plant, and a host besides, so like to other things than flowers, that they seem to have undergone a metamorphosis under the magic wand of some transforming power.—*Quart. Review.*